for based on the info within the query semantic dictionary. For example, search on "pc video player" will also bring back all documents related to "multimedia software that can be executed on a PC."

Above described is one embodiment of the invention. Of course a number of changes can
5    be made. For instance the techniques of the present invention generated in accordance with that copending application can be combined with those of the above mentioned copending application, serial # (CHA920030010US1) filed on even date herewith to select new semantic categories as described in this application. As an example, the "multimedia" category could be divided into subcategories for "computers" and "televisions" as the number of queries relating to "video
10    player" warranted such a distinction. Therefore it should be understood that while only one embodiment of the invention is described, a number of modifications can be made in this embodiment without departing from the spirit and scope of the invention as defined by the attached claims.

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In the above figures the textual analyzer can take many forms. It can be simple lookup tables that link the semantic dictionary to the incoming queries or documents. It can also use known commercially available analysis packages for analysis of the query terms. As shown in Figure 9, in more sophisicated systems the transaction analyzer, the semantic binder and the

5      dictionary builder can include submodules similar to those found in Figure 5 of copending application, serial # ~~CHA9200300010US1~~ 10/664,460.

The semantic binder can include the following sub-modules:

a sub-module 900 that identifies domain specific terms in a given query, using domain specific glossary 902 relating to the semantic taxonomy.

10      a sub-module 904 that finds synonyms and related terms for the identified terms, using domain specific thesaurus 906.

a sub-module 908 that finds statistically close terms using listings of associated sets of terms 910.

a sub-module 912 that identifies relevant semantic taxonomy specific categories for the

15      query terms, using domain specific ontology 914.


The dictionary builder 506 can include a sub-module 916 that binds queries in the identified semantic taxonomy categories using the results of the text analyzer 504.

The semantic binder 510 can include a sub-module 915 that adds new doc-query links to the meta-data of the textual index entries to link the documents to the semantic taxonomy

20      categories.


The Index/Meta-data Enhancer module modifies the original Textual Index 524, creating Enhanced Textual Index that replaces the original Textual Index and allows to find more relevant documents in response to the given query.


With this design, the search application not only applies Boolean operations (AND, OR

25      NOT) on end-user's query terms, but also it tries to figure out what the end-user is really looking

# METHOD OF SEARCH CONTENT ENHANCEMENT

## Related Applications

The contents of the following listed applications are hereby incorporated by reference:

(1) U.S. Patent application, serial # 10/157,243, filed on 05/30/2002 and entitled
5  "Method and Apparatus for Providing Multiple Views of Virtual Documents."

(2) U.S. Patent application, serial # 10/159,373, filed on 06/03/2002 and entitled "A
System and Method for Generating and Retrieving Different Document Layouts from a Given
Content."

(3) U.S. Patent application, serial # 10/180,195, filed on 06/27/2002 and entitled
10  "Retrieving Matching Documents by Queries in Any National Language."

(4) U.S. Patent application, (YOR920020141), filed on 07/23/2002 and entitled "Method
of Search Optimization Based on Generation of Context Focused Queries."

(5) U.S. Patent application, serial # 10/209,619 filed on 07/31/2002 and entitled "A
Method of Query Routing Optimization."

15  (6) U. S. Patent application, serial # 10/066,346 filed on 02/01/2002 and entitled
"Method and System for Searching a Multi-Lingual Database."

(7) U.S. Patent application, serial #10/229,552 filed on 8/28/2002 and entitled "Universal
Search Management Over One or More Networks."

(8) U.S. Patent application, serial #10/180,195 filed on 6/26/2002 and entitled "An
20  International Information Search and Delivery System Providing Search Results Personalized to a
Particular Natural Language."

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Change(s) applied  (9) U.S. Patent application, serial # ~~(CHA920030010US1)~~ filed on even date herewith
to document,
/M.W.J./  entitled "Method of Self Enhancement of Search Results Through Analysis Of System Logs"
4/11/2011